

What is claimed is:

1. A semiconductor device in which a plurality of electronic components are mounted on a flexible substrate constituted by a flexible film with wiring formed thereon and the flexible substrate is folded and received within a case,

wherein a reinforcing pattern is formed in a bending portion of the flexible substrate and reinforcing patterns are also formed at end portions of a pair of electronic components mounting areas, respectively, located on both sides of the bending portion, and portions of the flexible film present in gaps between the reinforcing pattern formed in the bending portion and the reinforcing patterns formed at end portions of the electronic components mounting areas are bent, whereby the flexible substrate is folded.

2. A semiconductor device according to claim 1, wherein the electronic components mounted on one of the paired electronic components mounting areas and the electronic components mounted on the other electronic components mounting area are arranged so as to be approximately axisymmetric with the bending portion as axis.

3. A semiconductor device according to claim 1, wherein wiring formed on one of the paired electronic components mounting areas and wiring formed on the other

electronic components mounting area are arranged so as to be approximately axisymmetric with the bending portion as axis.

4. A semiconductor device according to claim 1, wherein the reinforcing patterns formed at end portions of the electronic components mounting areas extend so as to surround the electronic components mounting areas.

5. A semiconductor device according to claim 1 or claim 4, wherein cutout portions are formed in part of the reinforcing patterns.

6. A semiconductor device according to claim 1, wherein the reinforcing patterns are formed using the same material as the material of the wiring.

7. A semiconductor device according to claim 6, wherein the reinforcing patterns constitute a part of a power wiring.

8. A semiconductor device according to claim 1, wherein the electronic components includes a memory chip.

9. A semiconductor device according to claim 8, wherein the memory chip is sealed in a TSOP.

10. A semiconductor device according to claim 1, wherein the wiring is formed on both sides of the flexible film.

11. A semiconductor device according to claim 10,

wherein the bending portion of the flexible film is formed with wiring on only one side thereof.

12. A semiconductor device according to claim 11, wherein the surface of the wiring and the surfaces of the reinforcing patterns are coated with a solder resist.

13. A semiconductor device according to claim 12, wherein the portions of the flexible film present in the gaps between reinforcing pattern formed in the bending portion and the reinforcing patterns formed at end portions of the electronic components mounting areas are coated with the solder resist on only one sides thereof.

14. A semiconductor device according to claim 1, wherein the flexible substrate is folded in three layers.

15. A semiconductor device according to claim 14, wherein the flexible substrate has three electronic components mounting areas and two bending portions positioned among the three electronic components mounting areas,

wherein, out of the three electronic components mounting areas, in one of two electronic components mounting areas except a central electronic components mounting area, a socket is attached to a longitudinal side face of the flexible substrate,

wherein, in the electronic components mounting area

with the socket attached thereto, passive components are mounted in the vicinity of the socket; and

wherein the flexible substrate is folded so that the electronic components mounting area with the socket attached thereto confronts the back of the other electronic components mounting area.

16. A semiconductor device in which a plurality of electronic components are mounted on a flexible substrate constituted by a flexible film with wiring formed thereon and the flexible substrate is folded and received within a case,

wherein a reinforcing pattern is formed in a bending portion of the flexible substrate and reinforcing patterns are also formed at end portions of a pair of electronic components mounting areas, respectively, located on both sides of the bending portion, and portions of the flexible film present in gaps between the reinforcing pattern formed in the bending portion and the reinforcing portions formed at end portions of the electronic components mounting areas are bent at two positions on both sides of the reinforcing pattern formed in the bending portion, whereby the flexible substrate is folded.